



Optional Device Manual

Seed Beads Device

Foreword




Thank you for purchasing the TAJIMA embroidery product.

Please read this manual thoroughly, understand the contents, and then use the machine.

This manual may contain discrepancies in detailed specifications when compared with the actual product. If you have any question, please ask the distributor for information.

Safety Precautions and Symbols




Items that require your special attention on handling the machine are specified below.

Description	Meaning
 DANGER	Indicates that there is a lot of danger of death or serious injuries* ¹ .
 WARNING	Indicates that there is a likelihood of death or serious injuries* ¹ .
 CAUTION	Indicates a potentially hazardous situation which may result in minor or moderate injury* ² or physical damage.



*1: A condition caused by electric shock, injury, fracture of a bone etc. that leads to aftereffects, or an injury that necessitates hospitalization or visits to a hospital over a long period.

*2: An injury that does not necessitate hospitalization or visit to a hospital over a long period.

The meaning of the symbols used throughout this document have the following meanings.

Symbol	Meaning
	Item to be prohibited
	Items that could cause electric shock
	Items to keep safety

Other Precautions

Description	Meaning
	Items that may affect stitching
	Recommended and useful tips.

Disclaimer, etc.

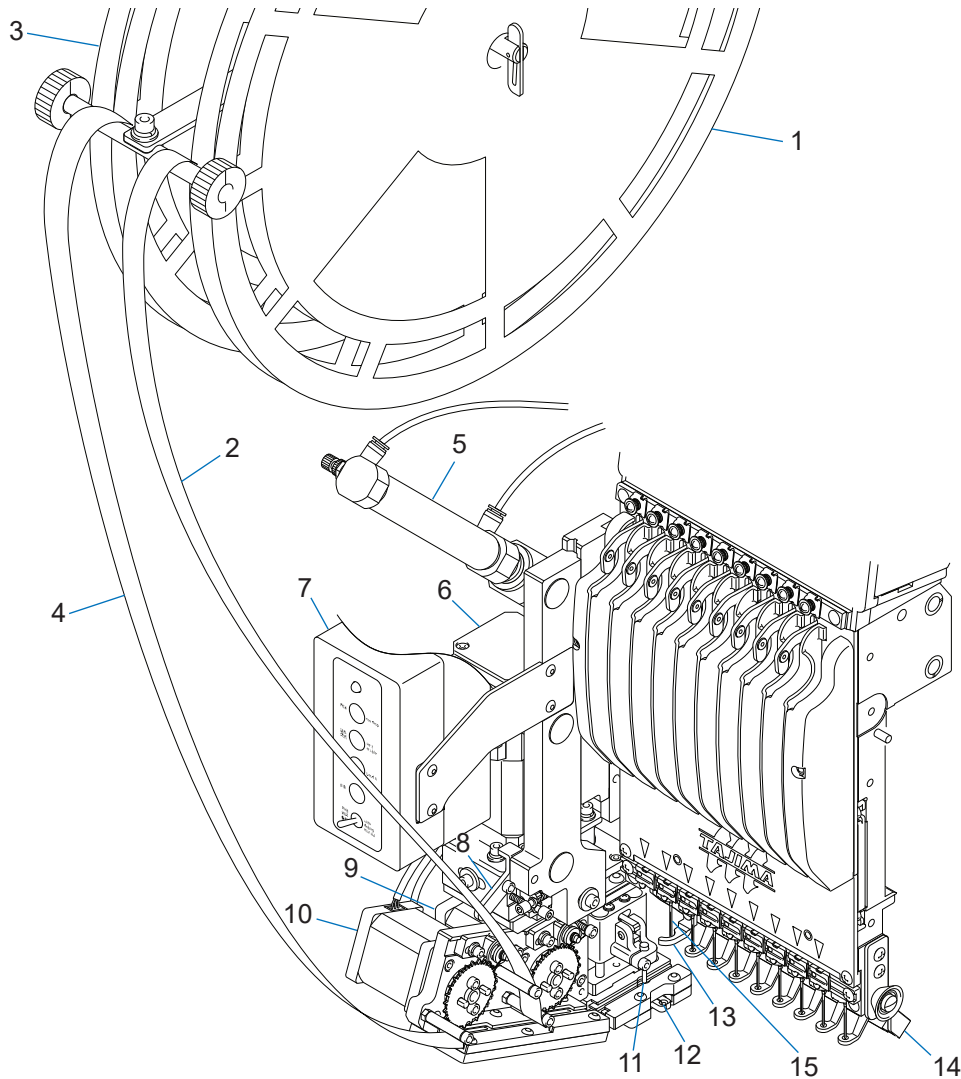
- The external views and specifications of the machine and the contents of this manual are subject to change without notice due to improvement.
- TAJIMA bears no responsibility regarding any damage arising from not observing the instructions in the manual or any fault or damage resulting from repair, disassembly, or modification not indicated in the manual.
- You may not copy, reproduce, or transcribe a part or whole of this manual without consent of TAJIMA.

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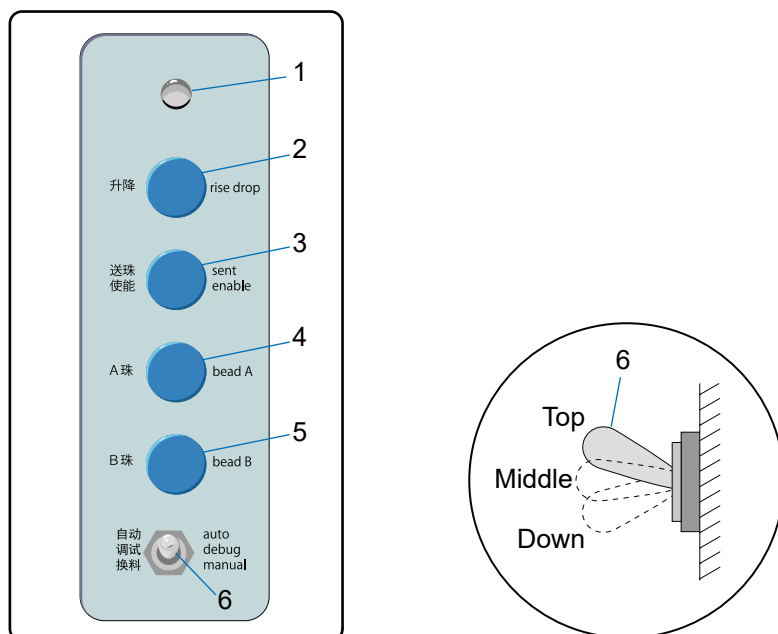
1. Name of each part

1-1. General drawing



1	Beads reel (side A)	9	Feed motor (side A)
2	Beads tape (side A)	10	Feed motor (side B)
3	Beads reel (side B)	11	Perforator
4	Beads tape (side B)	12	Beads holder
5	Air cylinder	13	Presser foot for beads
6	Holder drive motor	14	Upper thread holder for beads
7	Switch box	15	Needle for beads (ORGAN DBxK5Z4#10) (GROZ DBxK5SS#65/9)
8	Stopper lever		

1-2. Switch box

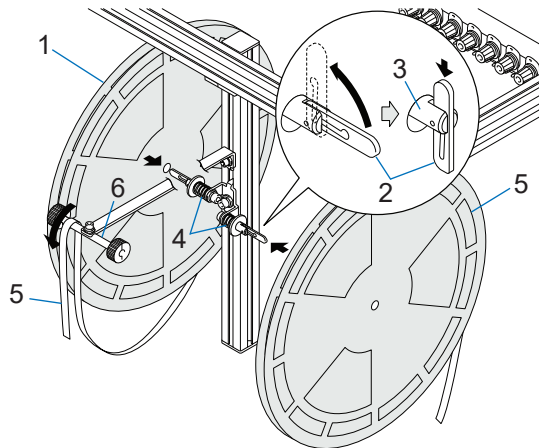


1	LED lamp	Red: Lights up from power on until ready. Green: Lights up when in auto mode or ready. Green/red: Lights up alternately if an error occurs to the servo motor. Blinking in red: Blinks when in adjustment or manual mode.
2	Not available	(Not available for use at present)
3	Holder feed switch	Pressing this switch in adjustment mode moves the beads holder to the stitching position. Pressing the switch again moves back the beads holder and, after the perforator perforates the beads, the beads holder returns to the retracting position.
4	Feed motor (side A) switch	Pressing this switch once in adjustment mode feeds one beads tape from the beads reel (side A).
5	Feed motor (side B) switch	Pressing this switch once in adjustment mode feeds one beads tape from the beads reel (side B).
6	Mode selector switch	Top (auto mode) Middle (adjustment mode) Down (manual mode)

2. Preparation

2-1. Attaching the beads reel

[For multi-head machine]



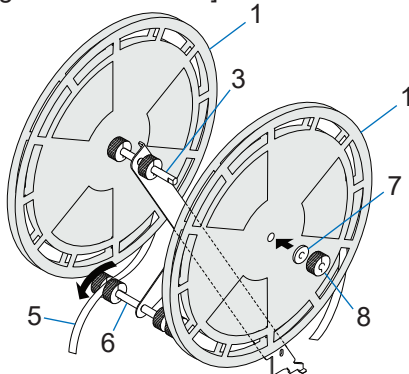
[For multi-head machine]

- 1 Make the beads reel 1 pass through the stopper 2 and the shaft 3 and push the spring 4 to set up and fix the stopper 2
- 2 Lead the beads tape 5 through the guide 6.



- Orient the beads reel as shown in the figure when attaching it.

[For single-head machine]



[For single-head machine]

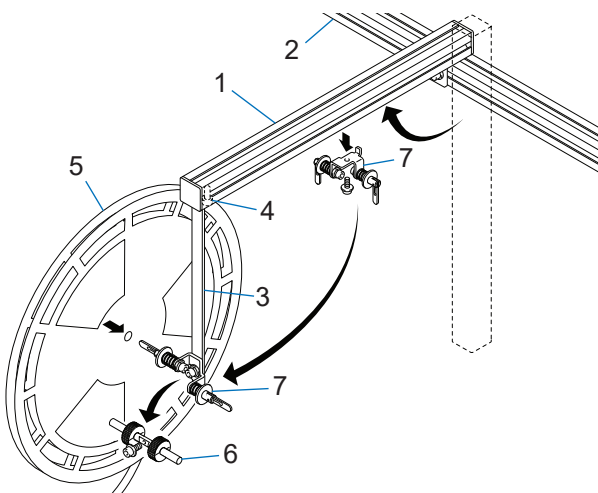
- 1 Insert the shaft 3 through the beads reel 1 and attach the felt 7 and split collar 8 to the shaft end.
- 2 Lead the beads tape 5 through the guide 6.



- Install the split collar so that the beads reel will rotate smoothly. Installing it too tightly causes the beads reel not to rotate.
- When doing so, take care not to twist the beads tape.

■ For concomitant use with a multi cording device (multi-head machine)

Change the beads reel mounting method to prevent the interference with the multi cording device.



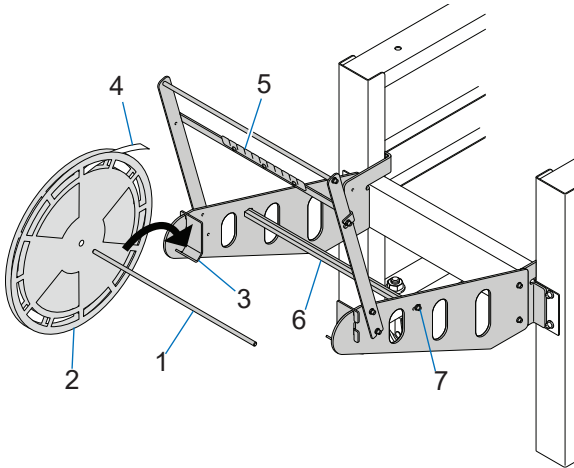
- 1 Change the orientation of the aluminum frame 1 and mount it onto the frame base 2.
- 2 Remove the reel shaft 6.
- 3 Loosen the bolt 4, move the guide bracket 3 to the tip of the aluminum frame 1, and fasten the guide bracket 3 with the bolt 4.
- 4 Remove the reel base 7 and fix it in the position where the reel shaft 6 was attached.
- 5 Set the beads reel 5 on the reel base 7.

■ For concomitant use with a multi cording device (single-head machine)

Use the reel stand (optional) to prevent the interference with the multi cording device.



- A stand for a single-head machine is required to mount the reel stand.

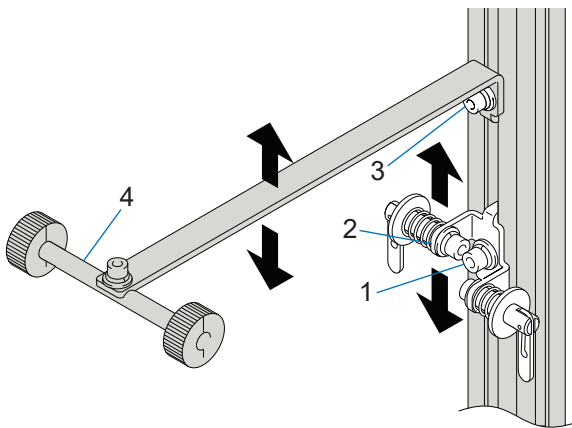


- 1 Pass the beads reel 2 through the reel shaft 1.
- 2 Hang the reel shaft 1 onto the hook 3.
- 3 Fasten the tip 4 of the beads tape to the tape holder 5.



- Adjust the position with the bolt 7 so that the reel presser 6 will touch the beads reel 2 lightly and that the reel will not rotate excessively.

2-2. Adjusting the beads reel attaching position

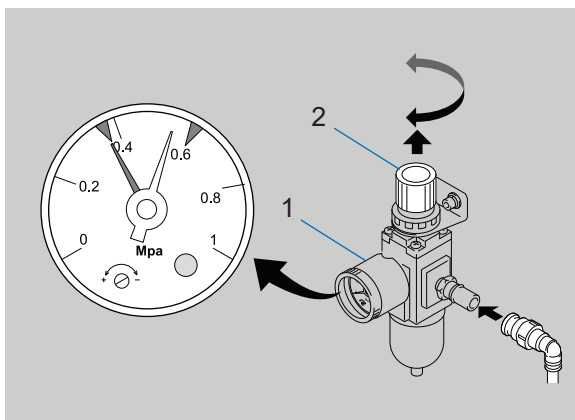


- 1 Loosen the bolt 1 and adjust the height of the reel base 2. After deciding the mounting position of the beads reel, fix it with the bolt 1.
- 2 Loosen the bolt 3 and adjust the height of the guide 4. Then tighten the bolt 3.



- Attach the beads reel at as high a position as possible to avoid hindering the work.

2-3. Air adjustment

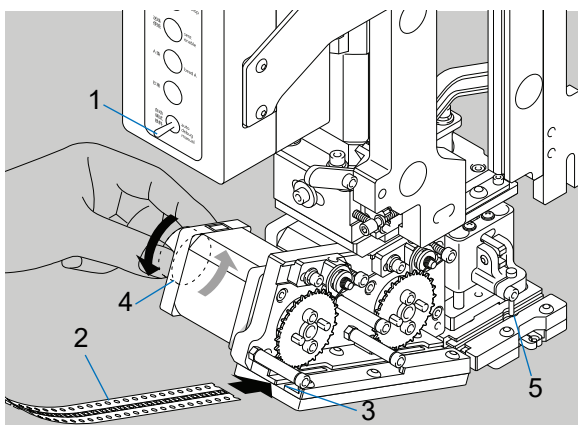


- 1 Supply air to the air regulator 1.
- 2 Pull up the knob 2 of the air regulator 1 and turn it to adjust the pressure of the air regulator to 0.55 MPa.
- 3 Push down the knob 2 of the air regulator 1 to lock it.

2-4. Setting of beads tapes

⚠ Caution

- ⊘ Do not directly touch the feed section when you install beads tape to the device. Doing so could cause your fingers to be caught.
- ! During the work, take care not to hit your head or face on the beads reel or guide.



- 1 Set the mode selector switch 1 on the switch box to the "Down (manual mode)" position.



- Setting the mode selector switch to the "Down (manual mode)" position allows you to rotate the feed motor by hand.

- 2 Lead the beads tape (side B) 2 through the guide (side B) 3.

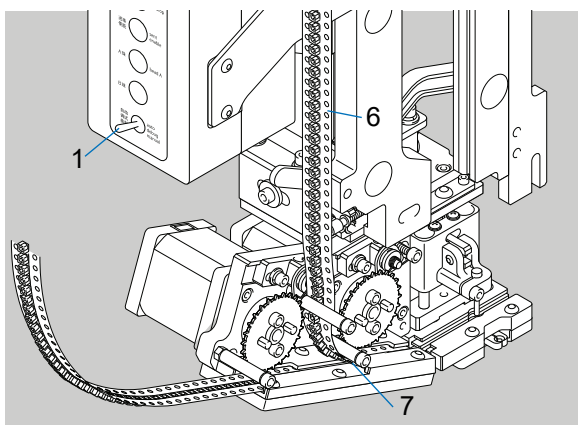
- 3 Feed the beads tape (side B) 2 to the position of the perforator 5 by turning the knob 4 of the feed motor (side B).

- 4 Similarly, lead the beads tape (side A) 6 through the guide (side A) 7.

- 5 Set the mode selector switch 1 to the "Top (auto mode)" position.

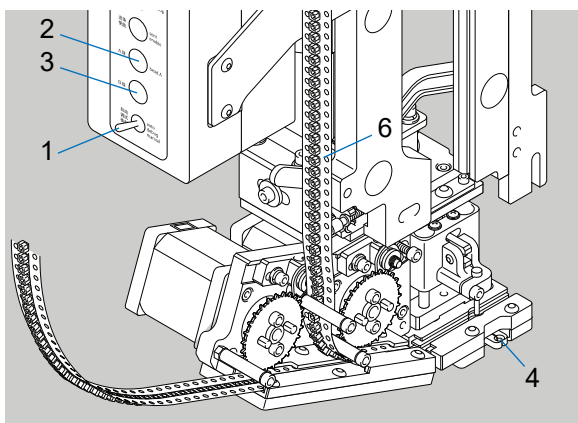


- When you set the mode selector switch to the "Top (auto mode)" position, the beads are perforated by the perforator and the beads holder returns to the retracting position.



2-5. Preparation for stitching

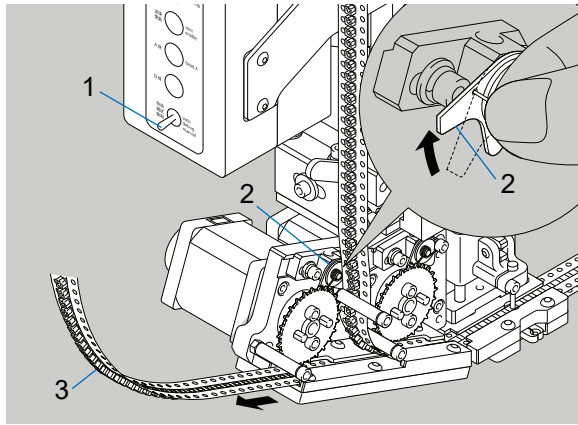
The stitching process stitches the beads currently contained in the beads holder. This means that you must in advance fill the beads holder side A or B, whichever you stitch first, with the beads you want to stitch.



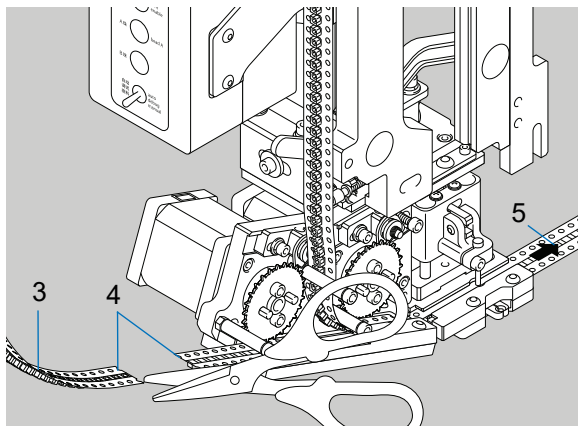
- 1 Set the mode selector switch 1 on the switch box to the "Middle (adjustment mode)" position.
- 2 Press the switch for the side you want to stitch beads first (side A 2 or side B 3).
- 3 Set the mode selector switch 1 to the "Top (auto mode)" position.

2-6. Replacing the beads reel

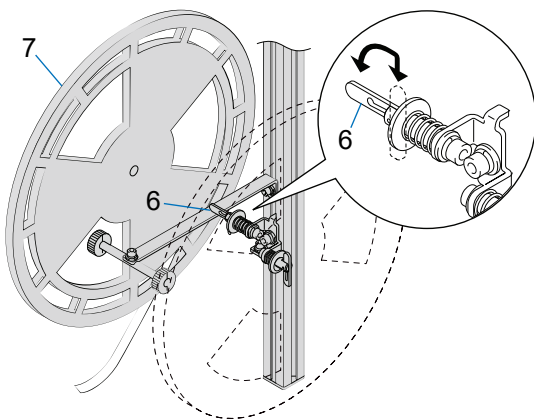
This example shows the procedure for replacing the beads reel (side B).



- 1 Set the mode selector switch 1 on the switch box to the "Down (manual mode)" position.
- 2 With the tape feed stopper 2 lifted up, pull out the beads tape (side B) 3 until the used portion becomes visible.



- 3 Cut the beads tape (side B) 3 at the boundary 4 between the used and unused portions.
- 4 Pull out the used portion 5 of the beads tape (side B) from the backside of the machine and discard it.



- 5 Tilt the stopper 6 sideways to release it.
- 6 Replace the beads reel (B side) 7.
- 7 Secure the new beads reel (B side) 7 with the stopper 6.



- For information on how to set beads tapes, see "2-4. Setting of beads tapes".

3. Moving up/down the seed beads device

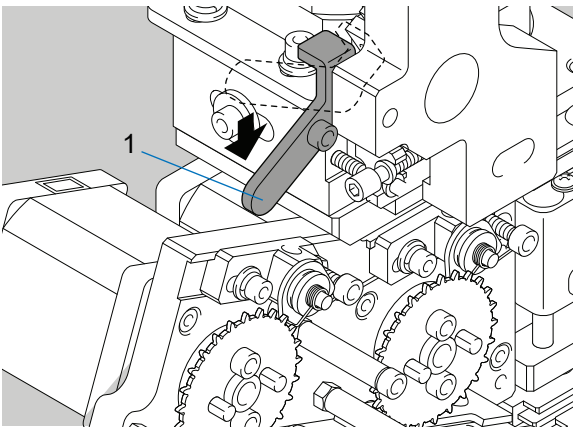
3-1. Up/down movement procedures

Use the operation panel of the seed beads device to move up/down the device.

⚠ Caution

- When moving up/down the seed beads device, do not bring your hand or face close to the device. Otherwise you may be hit and possibly injured by the moving parts.

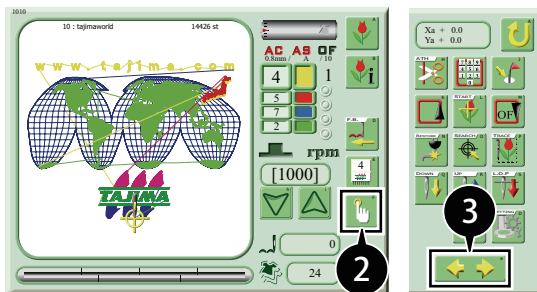
☒ TMAR, TMCR, TMCP, TMEZ




- Lower the stopper lever 1 to release the stopper. Releasing the stopper allows up/down movement of the device.

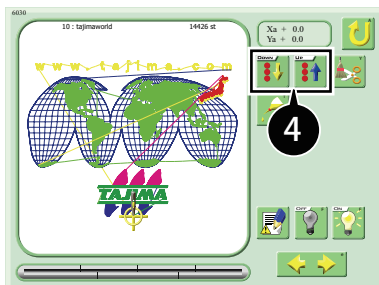


- The stopper is intended to prevent the seed beads device from descending from the up position. Release the stopper when you start embroidery.




- Press  on the main screen.

- Press .



- Select either up or down movement of the seed beads device:

To move it down, press .

To move it up, press .

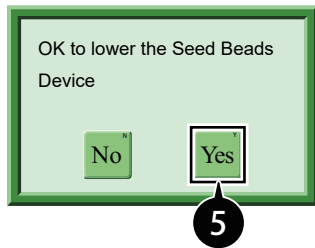


- When the needle bar case is not in the last needle position (if equipped at left side), the screen shows



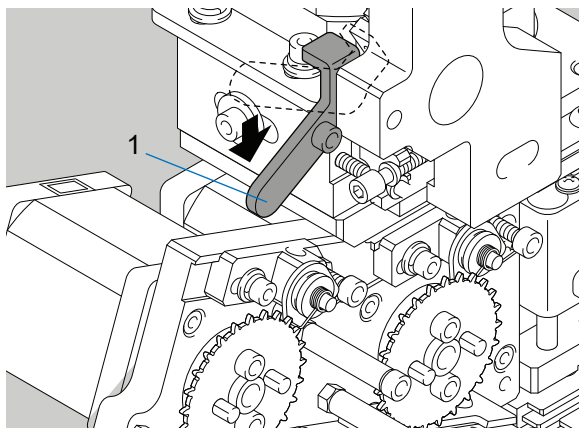
and does not accept any operation.

3. Moving up/down the seed beads device



5 Press **Yes**.

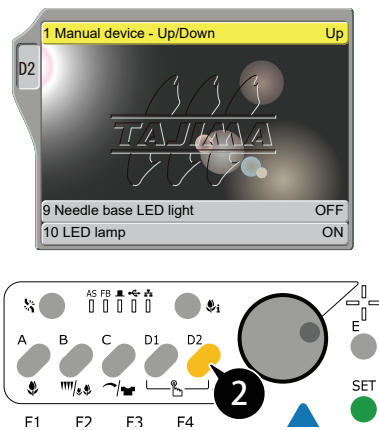
☒ TMBR, TMBP, TCMX, TLMX



1 Lower the stopper lever 1 to release the stopper. Releasing the stopper allows up/down movement of the device.



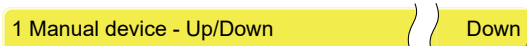
- The stopper is intended to prevent the seed beads device from descending from the up position. Release the stopper when you start embroidery.



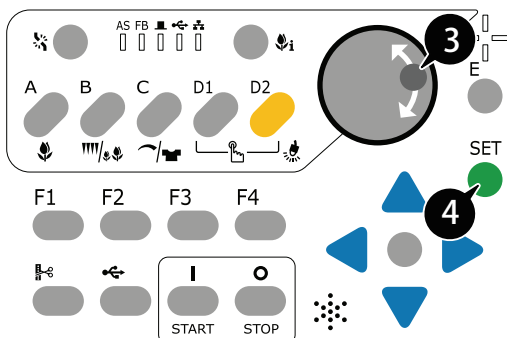
2 Press **D2**.



- The screen shows "Up" when the seed beads device is in the up position or "Down" when it is in the down position.
- When the needle bar case is not in the last needle position (if equipped at left side), the screen shows "-" and does not accept any operation.
- Icons and buttons available on the operation panel depend on the model.



3 Turn **SET** so that "Down" appears on the screen.



4 Press **SET**.



- When you change the setting to "Up" or "Down" on the "Manual Device - Up/Down" screen, the alarm sounds until you press **SET** to move up/down the device.

4. Precautions regarding beads embroidery

4-1. Precautions

⚠ Caution

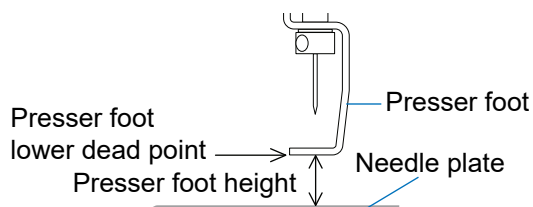
- ❗ Your design should space the beads by at least 2.5 mm. If your design uses dense or overlapping beads, stitching the beads may cause the beads to interfere with each other, possibly resulting in mis-stitching, or cause the needle to come into contact with the beads, possibly resulting in the breakage of the beads or needle.
- ⊘ During embroidery, do not bring your face close to moving parts. Beads may break and spatter.
- ❗ Before using the seed beads device, execute tracing to make sure that the device does not interfere with the frame.



- The Maximum RPM setting should be 800 rpm or lower.

5. Adjusting height of the presser foot

The presser foot lower dead point of the seed beads device is set to +1.5 mm by factory default. Under normal circumstances you do not need to change this value. If the fabric is thick, however, adjust the presser foot lower dead point using the following procedure. How to adjust the presser foot lower dead point differs depending on the model.

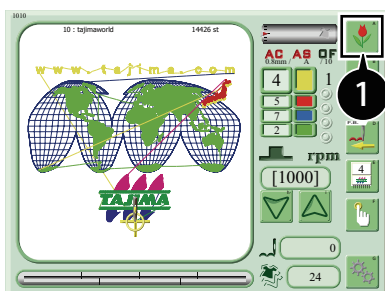



5-1. TMAR, TMCR, TMEZ

Adjust the presser foot lower dead point using the operation panel.



- You can set the presser foot lower dead point globally for all needle bars or individually for each needle bar or for each needle bar step. This example shows how to set the presser foot lower dead point for each needle bar step. For more information, refer to the user's manual of your machine.




- 1 Press  on the main screen.

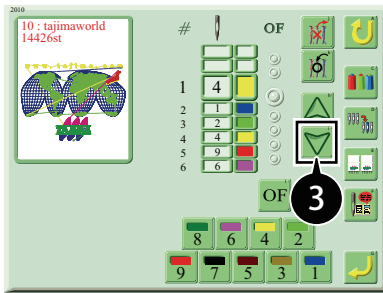



- You can also select a design whose data has not been set and set the presser foot lower dead point.

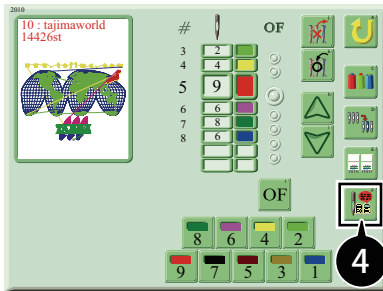
5. Adjusting height of the presser foot




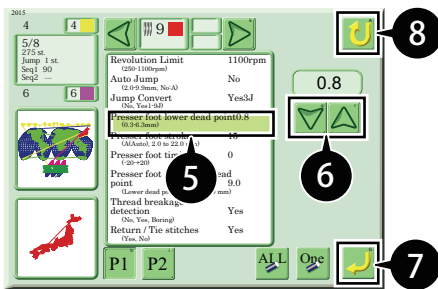
2 Press .





3 Press  and select the step for the needle bar #9 equipped with the seed beads device (i.e., step 5).



4 Press .



5 Select "Presser foot lower dead point".

6 Press   and change the height of the presser foot lower dead point.



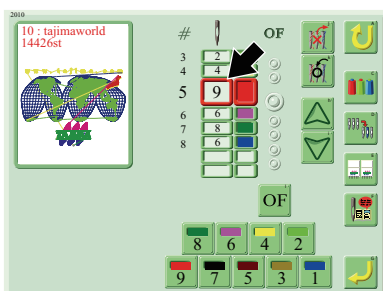
- The height of the lower dead point should be the fabric thickness +1.5 mm as a rough standard.

7 Press .

8 Press .



- Once the setting for the step for needle bar #9 (step 5) is changed, it is enclosed in a red frame.

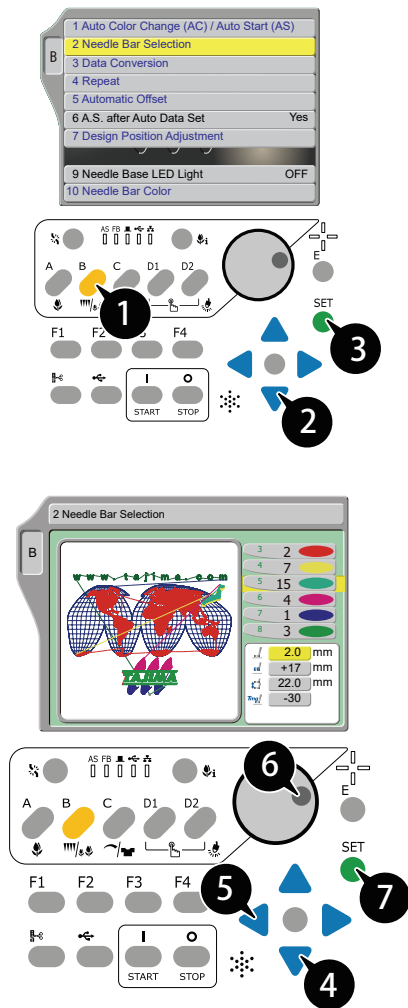









5-2. TMBR

Adjust the presser foot lower dead point using the operation panel.



- You can set the presser foot lower dead point globally for all needle bars or individually for each needle bar or for each needle bar step. This example shows how to set the presser foot lower dead point for each needle bar step. For more information, refer to the user's manual of your machine.



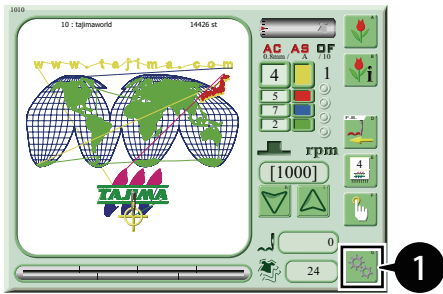
- Press .
- Press  and select "Needle Bar Selection".
- Press .
- Press  to select the steps for which you want to adjust the "Presser foot lower dead point".
- Press  to select the "Presser foot lower dead point".
- Turn  and set the "height of the presser foot lower dead point".
- Press .




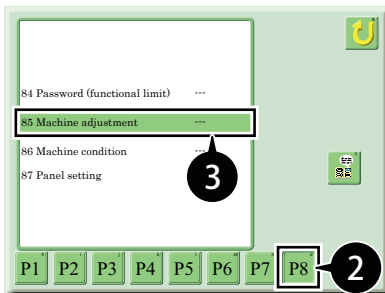
- The height of the lower dead point should be the fabric thickness +1.5 mm as a rough standard.

5-3. TMCP

Change the setting so that you can turn the main shaft by hand.

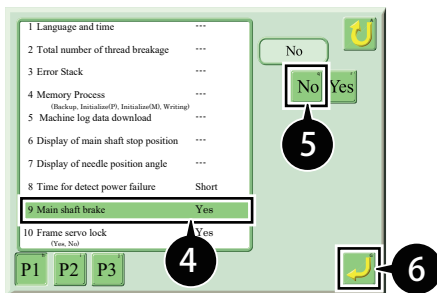


1 Press  on the main screen.




2 Press P8.

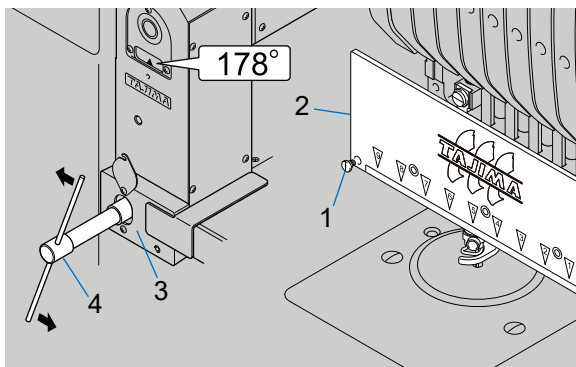
3 Select "85. Machine Adjustment".



4 Select "9. Main shaft brake".

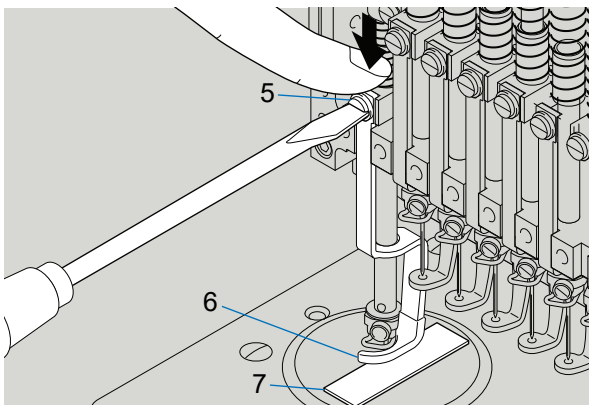
5 Press .

6 Press .



7 Remove the screw 1 to detach the needle bar case cover 2.

8 Insert the main shaft handle 4 into the rotary hook shaft transmission box 3 at the left side of the machine, turn the main shaft handle counterclockwise one turn and then set the main shaft angle to 178°.



9 Loosen the screw 5 and place the spacer 7 under the presser foot 6. (The height of the spacer 7 is the fabric thickness + 1.5mm)

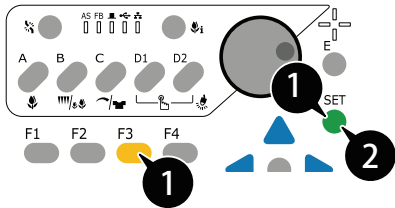
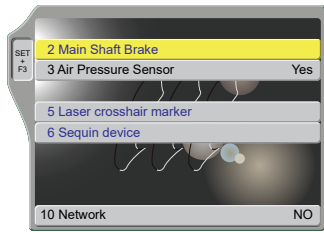
10 After adjusting the height of the presser foot 6 to the spacer 7, tighten the screw 5.

11 Remove the spacer 7. Turn the main shaft handle 4 counterclockwise to set the main shaft angle to 0°

12 Attach the needle bar case cover 2 with screw 1.

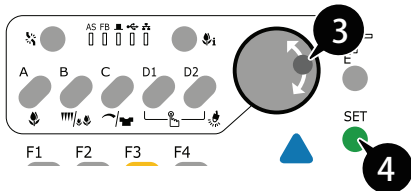
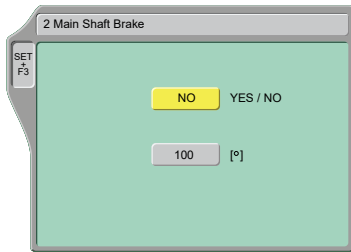
5-4. TMBP

Change the setting so that you can turn the main shaft by hand.



1 Press **F3** while pressing **SET**.

2 Press **SET**.



3 Turn **rotary knob** to select "NO".



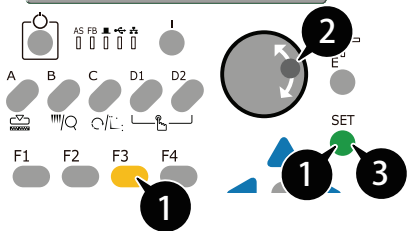
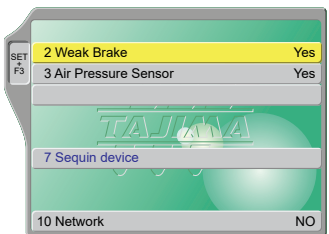
- "YES" is selected by default. If you select "NO" and restart the machine, the setting returns to "YES".

4 Press **SET**.

For more information on adjusting the presser foot lower dead point, see "5-3. TMCP - Steps 7 to 13".

5-5. TLMX, TCMX

Change the setting so that you can turn the main shaft by hand.



1 Press **F3** while pressing **SET**.

2 Turn **rotary knob** to select "NO".



- "YES" is selected by default.

3 Press **SET**.

For more information on adjusting the presser foot lower dead point, see "5-3. TMCP - Steps 7 to 13".

6. Maintenance

6-1. Cleaning

- If trash is accumulated in or around the beads holder and the feed section, perform cleaning by air blow.
- Remove any mis-stitched beads remaining on the seed beads device and fabric.
- Discard empty beads tapes remaining on the backside of the machine as appropriate.

6-2. Greasing

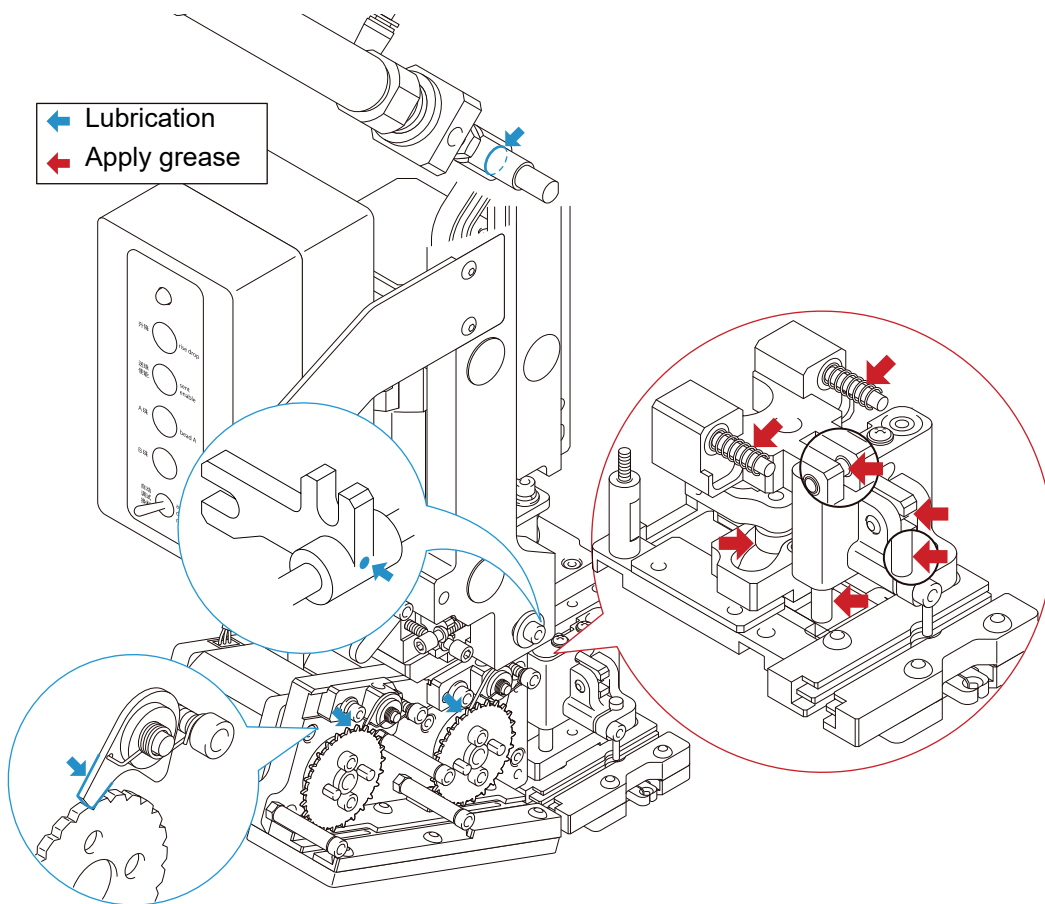
Lubricate or apply grease to the specified portions.

Lubricate: Once per 6 months

Apply grease: Once a year



- Always use Olefinic grease for plastics.



7. Troubleshooting

7-1. Beads device does not move up/down

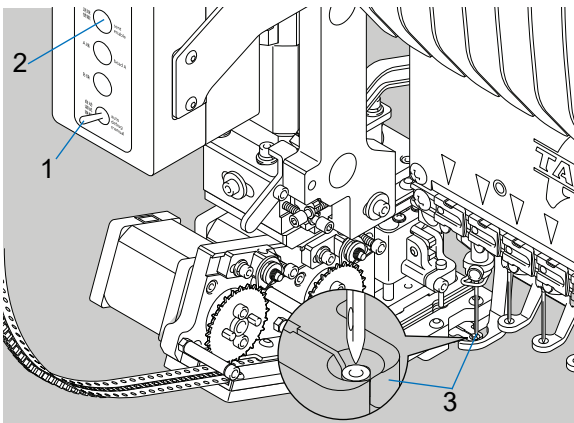
Problem	Countermeasure
The stopper lever remains locked.	Lower the stopper lever to release the stopper. Refer to "3-1. Up/down movement procedures".
Air is not supplied or the air pressure is low.	Check if air is supplied to the air regulator and adjust the air pressure. See "2-1. Air adjustment".
The air tube is disconnected.	Install the air tube correctly. If the tube is broken, consult your TAJIMA distributor.

7-2. Beads are often mis-stitched

Beads are often mis-stitched if the beads holder stitching position is not aligned with the center of the needle location. Align the stitching position with the center of the needle location.

⚠ Caution

⊘ Do not bring your hands or face close to moving parts when you adjust the device. Doing so could result in injury.

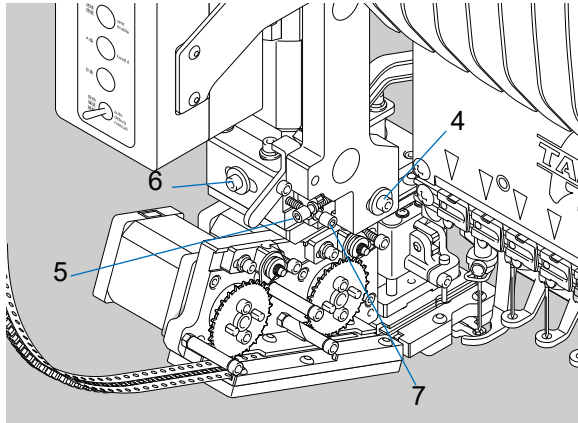


- For TMAR, TMCR, TMEZ, and TMBR, lower the presser foot before lowering the needle bar.

- 1 Release the up/down stopper and manually move down the beads device.
- 2 Set the mode selector switch 1 on the switch box to the "Middle (adjustment mode)" position.
- 3 Press the holder feed switch 2 to move the beads holder 3 to the stitching position.
- 4 Press down the needle bar by finger and check that the needle is aligned with the center of beads.

⚠ Caution

- ⊘ Do not move the beads holder while pressing down the needle bar.
- ⊘ Do not move up/down the device while pressing down the needle bar. Otherwise the machine or device may fail.

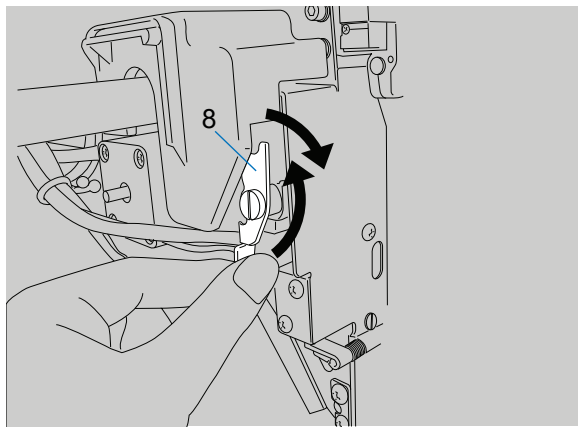


[If the beads and needle positions are not aligned in the back-and-forth direction]

- 5 Loosen the screw 4 and adjust the positions with the screw 5.
- 6 After adjustment is finished, tighten the screw 4.

[If the beads and needle positions are not aligned in the right-and-left direction]

- 7 Loosen the screw 6 and adjust the positions with the screw 7.
- 8 After adjustment is finished, tighten the screw 6.

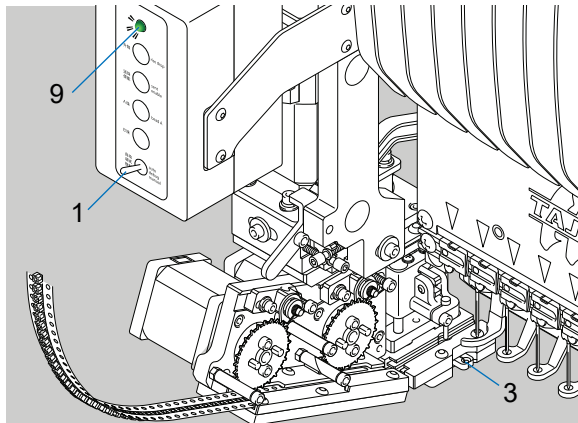


- 9 Turn up the clutch lever 8.
The needle bar is released and returns to the original position.
(For TMCP, TMBP, TLMX, and TCMX only)

- 10 Turn down the clutch lever 8 to move it to the original position.



- Otherwise the needle bar is still released and you cannot perform stitching.



- 11 Set the mode selector switch 1 to the "Top (auto mode)" position.
The beads holder 3 returns to the retracting position and the LED lamp 9 lights up in green.

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